[J. Chem. Crystallography, **26**, 445-449 (1996)] [Lab. of Pharm. Synthetic Chemistry]

An Interesting Inclusion Phenomenon with (*S*)-1-(Hydroxydiphenylmethyl)-5-azoniaspiro[4.4]nonane Bromide and (*S*)-1-(Hydroxydiphenylmethyl)-5-azoniaspiro[4.5]decane Bromide and Optical Resolution of Binaphthyl and Biphenanthryl Diols by Inclusion Crystallization with These Optically Active Ammonium Salts.

Min SHI, Nobuhiro ITOH, Yukio MASAKI,* Motoo SHIRO

Recrystallization of the spiro-pyrrolidinium salts (*S*)-1-(hydroxydiphenylmethyl)-5-azoniaspiro[4.4]nonane bromide or (*S*)-1-(hydroxydiphenylmethyl)-5-azoniaspiro[4.5]decane bromide from chloroform afforded a crystalline spiro-pyrrolidinium salt including two molecules of chloroform which was determined by ^{1}H-NMR, elemental analysis, and X-ray analysis. Racemic 2,2'-dihydroxy-1,1'-binaphthyl and 10,10'-dihydroxy-9,9'-biphenanthryl have been resolved effectively by inclusion crystallization using these chiral ammonium salts.

[J. Chem. Research (S), **1996**, 352-353; (M), **1996**, 1946-1955] [Lab. of Pharm. Synthetic Chemistry]

Axially Dissymmetric Chiral (Diamine)copper- and (Diimine)copper-catalysed Asymmetric Aziridination of Alkenes.

Min SHI, Nobuhiro ITOH, Yukio MASAKI*

Axially dissymmetric chiral diamine and diimine ligands having a 1,1'-binaphthyl or 1,1'-biphenyl moiety have been successfully synthesized and their copper complexes have been used to catalyse asymmetric aziridination of alkenes in acetonitrile.

[Tetrahedron Lett., **37**, 9321-9324 (1996)] [Lab. of Pharm. Synthetic Chemistry]

Total Synthesis of Thromboxane B_2 Starting from (*R,R*)-Tartaric Acid as a Chiral Pool.

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Optically active natural thromboxane B_2 (TXB_2) was synthesized from (*R,R*)-tartaric acid as only chiral source. The synthesis was achieved through regio- and stereoselective introduction of acetate moiety at the C2-position of the 6,8-dioxabicyclo[3.2.1]octane derivative to provide an acetamide derivative, partial ring opening of the bicylic skeleton to give a pyranoid, and construction of the C15-hydroxyl group of TXB_2 by stereospecific allylic transposition of the inherent chirality of tartaric acid in the *trans*-allylic acetate.